

March 27, 1984

MEMO TO FILE

RE: EXP/037/052 &  
ACT/019/005  
Summary of Informal (Nuclear  
Waste Repository Site)  
Geologic Information  
Discussions Held During the  
Public Meetings in Moab and  
Monticello

A combined field trip was arranged with the Office of Planning and Budget in conjunction with the Technical Review Group for February 29 and March 1, 1984. Two evening meetings were attended where the local public received information from the Department of Energy (DOE), Office of Nuclear Waste Isolation (ONWI) Battelle Institute, and Woodward Clyde Consultants (WCC). Observation and interaction with these agencies was undertaken as part of the State's contingent.

On Wednesday, prior to the first evening meeting in Monticello, I met with Ivan Wong (WCC) and Rudy Higgins (Texasgulf Corp.) to discuss the concept of installing seismometers on the surface of the Cane Creek Potash Mine. Monitoring was to begin within the first week of March while operations at the site involved the pump down (or out) of brine solution from Salt Bed Five of the Paradox Formation. Monitoring for approximately two to three months may reveal two basic kinds of occurrences. Primarily, Woodward Clyde is seeking to determine whether any "background", deep-seated seismic activity is detectable and if so, how, when and where it may occur (depth, frequency, magnitude, Shafer Basin, Gibson Dome, etc.). Superimposed upon this data is the possible effect of strain release in the Paradox Formation surrounding the solution mined cavities in Salt Bed Five. This may produce additional micro-seismic activity which can be detected.

The Division of Oil, Gas and Mining (DOGM) should be interested in these results because the stress data generated may indicate whether interformational fracturing is occurring due to the mining techniques. Cavitation of overlying beds and inner-formational decomposition could become a concern as the unmonitored solution techniques progress throughout the bed in the future. Results of the monitoring, including a final report, were requested. As long as a distinction is maintained regarding any connection (politically) between the nuclear waste repository site proposal and Texas Gulf's operation, the results may be presented by the company in connection with the mine permitting process. The review of the company's mining and reclamation plan is continuing.

The following day, March 1, three separate meetings (I. - III.) were held which are worth noting.

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I. Three separate inspections were performed including the following people: Rick Moleski (ONWI), Dave Tillman (consultant), Bob Turri (BLM) and Terry Grant (WCC). The Kubat, Elk Ridge-1, and Gibson Dome-1 drillsites were visited.

The Kubat drillsite (a pre-existing wildcat well) was adequately regraded and vegetation was beginning to return. Indian Ricegrass and Crested Wheat were established sporadically but Four Wing Saltbush was not evident. Russian Thistle was encroaching on the site. The few hundred yards of access road was not reseeded but large trees and brush had been dragged across it. The drillhole had a large I.D. plate and concrete plug installed at the surface. The site has good potential for success. Grazing is not a problem but recent use of the area by four-wheel vehicles (pot-hunters, wood cutters) is evident.

The Elk Ridge -1 site is situated in a 15-20 year old chained-off area. Large piles of old brush and Pinyon-Juniper trees are scattered everywhere. Grazing evidence is abundant. The drill hole is plugged and marked at the surface. Indian Ricegrass has returned after reseeded efforts but is close-cropped. The site has already reached the reclamation success standard of the surrounding area due to the overall "holocaust" appearance of the chaining. Grazing will probably continue to effect the site detrimentally.

The Gibson Dome-1 site was also visited, although the Division was not involved with the permitting in 1981. An excessively large staging area surrounding the drill site was regraded. The temporary plug was buried to allow future access if necessary. Boulders block the access road and harrowing has been evident. No signs of any planned revegetation were found. Russian Thistle could be choking everything else out. When final reclamation takes place, additional efforts will be needed to establish natural species, i.e., soil tests, fertilization, transplants, seed drilling. The site will serve as a useful model for reclamation practices in the area. Renewed efforts should be initiated in the fall of 1984.

The site of proposed GD-2 and the nuclear waste repository shaft in Davis Canyon was also visited with Bob Turri. Access will be a major problem as reclamation of sites in the area appears difficult and as such, new disturbance should be limited. I agree with Mr. Turri that limited access during the drilling of GD-2 may be extended if the project is approved. This should be via the dry wash instead of cutting in a new road. Cessation of traffic during runoff periods should be required. Alternate routes must be evaluated if shaft construction proceeds after GD-2 is completed.

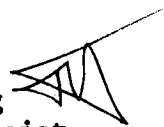
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II. During the public information meeting in Moab on March 1, several individuals were contacted in the school auditorium. Scott Smith and Tom Frasier, geologists from ONWI and WCC, offered ideas about the lack of a defined brine drilling-fluid disposal plan. I advised them to make contact with the State Health Department and the Division UIC program to develop a particular and definite plan. Plugging substances or designs which will secure the shaft and/or prevent interformational migration of brine solutions upon reclamation are also in a development stage and must be finalized prior to project approval.

A project engineer, Lynn (?) who appears to be in charge of at-depth, in-situ, experimental testing procedures for the proposed repository was also contacted. His opinion was solicited concerning the present adequacy of proposed tests. He did not feel that the underground facilities would be large enough to conduct all necessary tests. He also indicated that two shafts would be more ideal for a facility of this proportion and design. Areas which are not currently being considered for specific tests, which may prove important as siting criteria, are salt bed cavitation, interformation and interformation migration of strain release fractures, and fracture healing mechanisms. Gathering information in these areas could be more time consuming than what is presently allowed for testing procedures. The nature of these concerns may effect or relate to potential transmission avenues for radio-activity from the repository.

III. A final meeting on March 1 was held with members of the Moab group, Utahns Against the Dump. They are a local, grassroots organization of Grand County citizens working to disseminate information to counter-balance the extreme "Pro-dump" viewpoint which has been given so much attention in the media. State government organization and official recognition of the group were topics discussed. A future meeting with Loretta Pickerell (Office of Planning and Budget) was suggested to the group as a beginning direction.

Upon my return from the trip, I discussed events with both Jim Smith (DOGM) and Loretta Pickerell (OPB).

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